

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 January 2002 (24.01.2002)

PCT

(10) International Publication Number
WO 02/06112 A1

(51) International Patent Classification⁷: B63B 43/12,
43/10

SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,
ZW.

(21) International Application Number: PCT/GR01/00039

(22) International Filing Date: 17 October 2001 (17.10.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20000100367 23 October 2000 (23.10.2000) GR

(71) Applicant and

(72) Inventor: PAPAGELLOU, Christos [GR/GR]; 10 Kara-
georgi Servias Str., GR-105 62 Athens (GR).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

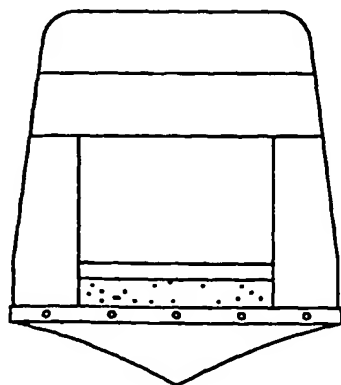
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments
- upon request of the applicant, before the expiration of the
time limit referred to in Article 21(2)(a)

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: UNSINKABLE VESSEL

(57) Abstract: The divided in two parts (1-2) ship and the raft
(3) that was added between them and made it unsinkable, has the
advantage that no human lives can be lost, nor personal belong-
ings of the passengers and the ship itself cannot sink and it has
also very low construction cost and even lower insurance cost.



WO 02/06112 A1

UNSINKABLE VESSEL

The invention involves a ship and a raft, which, joined together, make the ship unsinkable.

The ships and the rafts are already known, but joined together ship-raft, not until now.

5

BUOYANCY MATERIALS

The raft can be constructed by various swelled materials, such as polystyrene, PVC, polyurethane, etc., or whatever material can hold air, compressed air or various gases and these materials can be in the form of crumbs, pieces or they can undivided and also inflammable.

10

COLLISION AND CRACK

In case of a collision or even in case of a crack, the buoyancy room (3) cannot be overflowed by water, because of the buoyancy material (3) that fills it, except at the exact point of the occurred damage, where a small percentage of the buoyancy material will be destroyed, which will be counted-in though, so the ship-raft will not sink.

15

ADVANTAGES

- 20 1st It does not sink, even in case of a collision or crack.
- 2nd There are no technical difficulties in the construction.
- 3rd Replacing the raft is an easy process.
- 4th It applies to all kinds of ships, regardless their size.
- 5th It functions in all weather conditions.

25

DRAWINGS

Drawing 1 shows the side view of the ship, with its parts (1-2) divided and the raft (3) between them.

Drawing 2 shows the back view of the ship when the raft (3) is already applied to the ship.

30

EXAMPLE

In order for my invention to be understandable, I will use as an example the swelled polystyrene (felizol) : 1 m³ of felizol has a buoyancy of 900 almost kilos, therefore on a slab of felizol of 20m x 100m x 3m, which is
5 6.000 m³, we can put a burden of 5.400 tons, distributed equally all over the slab's surface and still, it will not sink. The size of the raft change, according to the size and the use of the ship.

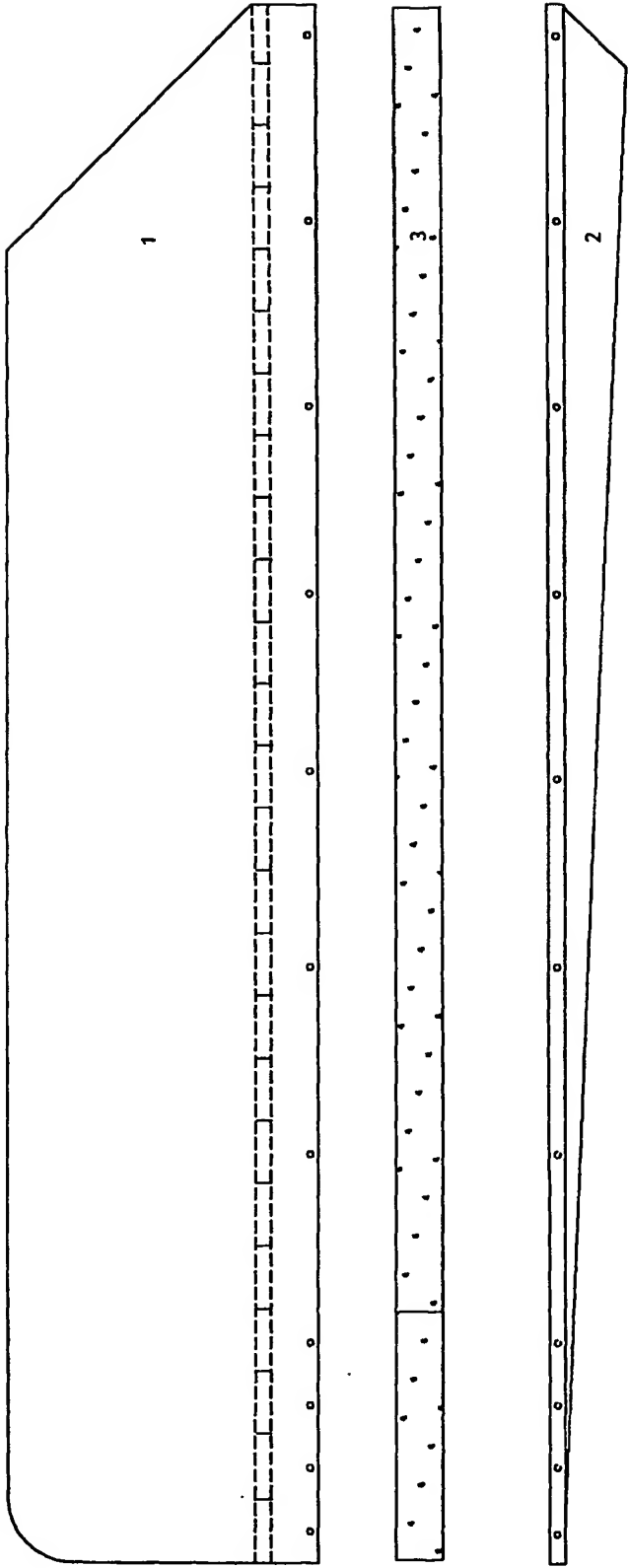
BUOYANCY MATERIALS – ARTIFICIAL SWELLING

- 10 It is attained with various ways, airtight closed, such as :
- 1.- Plastic balls filled with air, compressed air or gases, soldered together.
 - 2.- Plastic cubes, blowing of extruder.
 - 3.- Plastic cubes of injection, fifty-fifty and soldered together.
 - 4.- Plastic cubes of vacuum, fifty-fifty and soldered together.
 - 15 5.- Plastic stratuses or pillows, soldered with alto-frequent.
 - 6.- Metallic ventilators, soldered.
 - 7.- Metallic wadded pipes.
 - 8.- Plastic or metallic reservoirs.
 - 9.- Plastic convex tiles of extruder, air tightly soldered at the edges, with a
 - 20 folding such as the one of a plastic bag sides, even with inner ribs, which are super-automatically manufactured, and so, with the cheapest cost, in every dimension and length we want, by one and only production line. The material, the hardness, the shape and the dimensions will be fixed by me during the stage of the testing and the stage of measurements , when the
 - 25 weight per 1 m³ will also occur for the calculation of the artificial swelled lifting power.

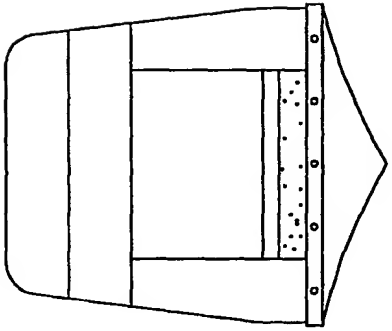
CLAIMS

- 1.- The ship-raft is characterized by the fact that the ship is divided into two parts (1-2) and between the two parts (1-2) of the ship a raft (3) is added which has a buoyancy greater than both the weight and the cargo of the ship, this is why it is unsinkable.
- 5 2.- The ship-raft, according to Claim 1, is characterized by the fact that the position that the raft is fixed, does not hydro dynamically affects the ship and its functions.
- 3.- The ship-raft, according to Claims 1 and 2 , is characterized by the fact that the raft is added to every type of ship, no matter the size and the use
10 of the ship and it also corresponds to all weather conditions.
- 4.- The ship-raft , according to Claims 1, 2 and 3 is characterized by the fact that the raft can be constructed by various swelled materials, such as polystyrene or PVC or polyurethane as well as by every other material which can hold air, compressed air or various gases and this material can
15 in crumbs, pieces or undivided, even inflammable.

1



2



INTERNATIONAL SEARCH REPORT

International	Application No
PCT/GR 01/00039	

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B63B43/12 B63B43/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 196 54 819 A (ERDMANN WOLFHARD) 25 June 1998 (1998-06-25) the whole document	1-4
X	DE 41 11 013 A (ERDMANN WOLFHARD) 8 October 1992 (1992-10-08)	1-3
Y	the whole document	4
X	DE 44 36 253 A (ERDMANN WOLFHARD) 4 April 1996 (1996-04-04)	1, 3
Y	the whole document	4
X	US 5 921 195 A (YILMAZ G GEORGE) 13 July 1999 (1999-07-13) column 3, line 24 -column 4, line 9; figures 4,5	1, 4
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

3 December 2001

Date of mailing of the international search report

12/12/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Moya, E

INTERNATIONAL SEARCH REPORT

Internatic... ..plication No

PCT/GR 01/00039

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 199 07 916 A (AGNOS SCHIFFKO GMBH) 7 September 2000 (2000-09-07)	4
A	claims 1-10; figures -----	1-3
A	DE 198 20 895 A (SEIDEL RAINER) 23 September 1999 (1999-09-23) column 2, line 67 -column 4, line 20; figures -----	1-4

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GR 01/00039

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19654819	A	25-06-1998	DE 19654819 A1	25-06-1998
DE 4111013	A	08-10-1992	DE 4111013 A1	08-10-1992
DE 4436253	A	04-04-1996	DE 4436253 A1	04-04-1996
US 5921195	A	13-07-1999	NONE	
DE 19907916	A	07-09-2000	DE 19907916 A1	07-09-2000
DE 19820895	A	23-09-1999	DE 19820895 A1	23-09-1999
			AU 3406699 A	18-10-1999
			BR 9908995 A	03-04-2001
			CN 1293634 T	02-05-2001
			WO 9948751 A2	30-09-1999
			EP 1104384 A2	06-06-2001
			NO 20004725 A	20-11-2000
			PL 343561 A1	27-08-2001
			TR 200002705 T2	21-12-2000
			DE 29808443 U1	08-04-1999